



6BQ5

# POWER PENTODE

9-PIN MINIATURE TYPE

6BQ5

## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathode:

Voltage . . . . . 6.3 . . . . . ac or dc volts

Current . . . . . 0.76 . . . . . amp

Direct Interelectrode Capacitances:<sup>0</sup>

Grid No.1 to plate. . . . . 0.5 max.  $\mu$ f

Grid No.1 to cathode & grid No.3,  
grid No.2, and heater . . . . . 10.8  $\mu$ f

Plate to cathode & grid No.3,  
grid No.2, and heater . . . . . 6.5  $\mu$ f

### Characteristics, Class A<sub>1</sub> Amplifier:

Plate Voltage . . . . . 250 volts

Grid-No.2 (Screen-grid) Voltage . . . . . 250 volts

Grid-No.1 (Control-grid) Voltage. . . . . -7.3 volts

Plate Resistance (Approx.). . . . . 38000 ohms

Transconductance. . . . . 11300  $\mu$ hos

Plate Current . . . . . 48 ma

Grid-No.2 Current . . . . . 5.5 ma

### Mechanical:

Operating Position. . . . . Any

Maximum Overall Length. . . . . 3-1/16"

Maximum Seated Length . . . . . 2-13/16"

Length, Base Seat to Bulb Top (Excluding tip). 2-7/16"  $\pm$  3/32"

Diameter. . . . . 0.750" to 0.875"

Dimensional Outline . . . . . See General Section

Bulb. . . . . T6-1/2

Base. . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)

Basing Designation for BOTTOM VIEW. . . . . 9CV

Pin 1 - Internal Con-  
nection—  
Do Not Use

Pin 2 - Grid No.1

Pin 3 - Cathode,  
Grid No.3



Pin 4 - Heater

Pin 5 - Heater

Pin 6 - Same as Pin 1

Pin 7 - Plate

Pin 8 - Same as Pin 1

Pin 9 - Grid No.2

## AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Center Values:

PLATE VOLTAGE . . . . . 300 max. volts

GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . . 300 max. volts

GRID-No.1 (CONTROL-GRID) VOLTAGE:

Positive-bias value . . . . . 0 max. volts

CATHODE CURRENT . . . . . 65 max. ma

PLATE DISSIPATION . . . . . 12 max. watts

GRID-No.2 INPUT<sup>•</sup> . . . . . 2 max. watts

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## PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode.	100 max.	volts
Heater positive with respect to cathode.	100 <sup>▲</sup> max.	volts

## Typical Operation:

Plate Voltage. . . . .	250	volts
Grid-No.2 Voltage. . . . .	250	volts
Grid-No.1 Voltage. . . . .	-7.3	volts
Peak AF Grid-No.1 Voltage. . . . .	6.2	volts
Zero-Signal Plate Current. . . . .	48	ma
Max.-Signal Plate Current. . . . .	50.6	ma
Zero-Signal Grid-No.2 Current. . . . .	5.5	ma
Max.-Signal Grid-No.2 Current. . . . .	10	ma
Effective Load Resistance. . . . .	4500	ohms
Total Harmonic Distortion. . . . .	10	%
Max.-Signal Power Output . . . . .	5.7	watts

## Maximum Circuit Values:

## Grid-No.1-Circuit Resistance:

For fixed-bias operation . . . . .	0.3 max.	megohm
For cathode-bias operation . . . . .	1 max.	megohm

○ Without external shield.

● Grid-No.2 input must not exceed 4 watts under maximum-signal conditions.

▲ The dc component must not exceed 100 volts.

## OPERATING CONSIDERATIONS

The *bulb* becomes hot during operation. To insure adequate cooling, therefore, it is essential that free circulation of air be provided.



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# AVERAGE CHARACTERISTICS

$E_f = 6.3$  VOLTS  
GRID-N $\#$ 2 VOLTS = 250

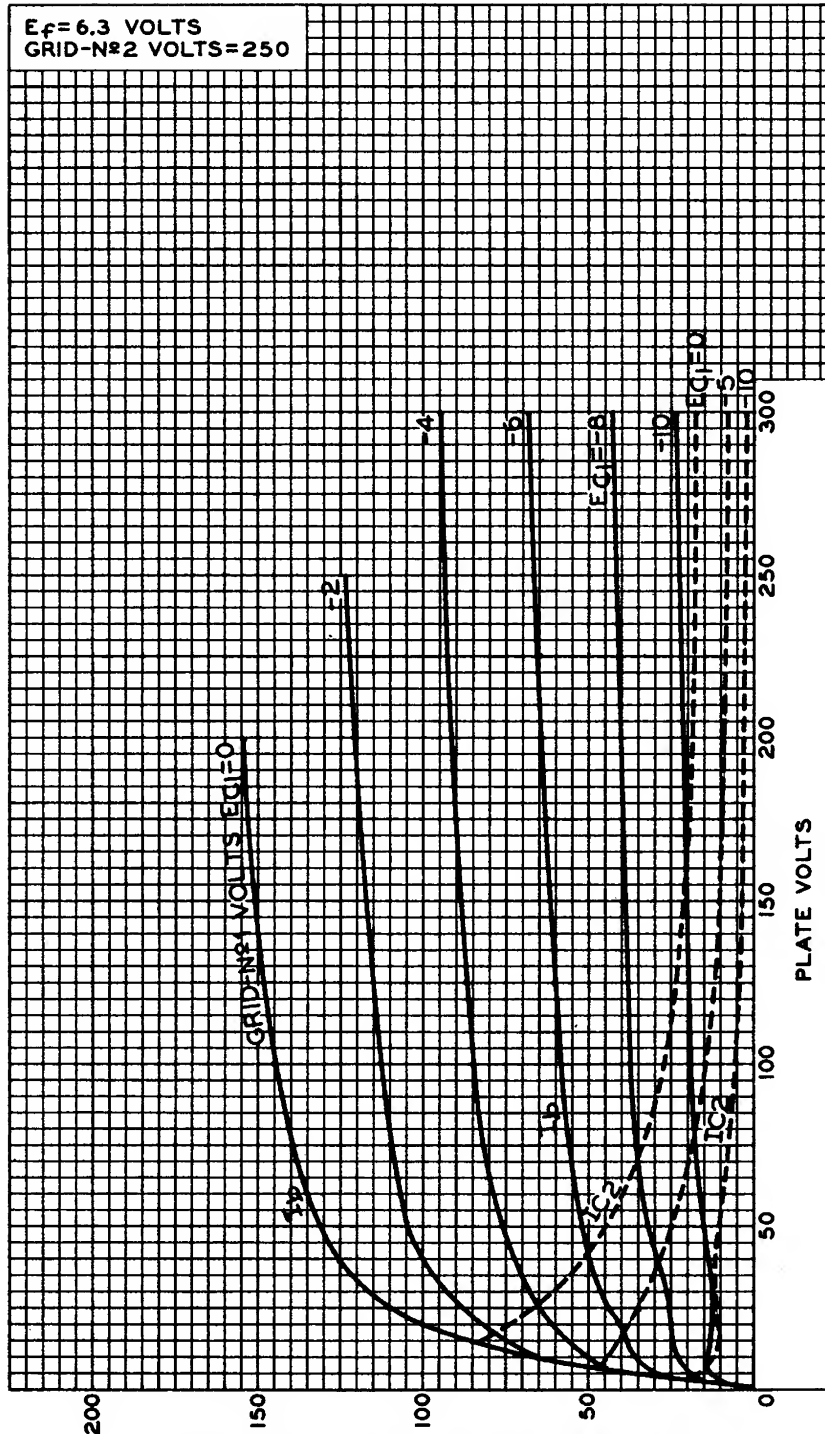


PLATE ( $I_b$ ) OR GRID-N $\#$ 2 ( $I_{C2}$ ) MILLIAMPERES

ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

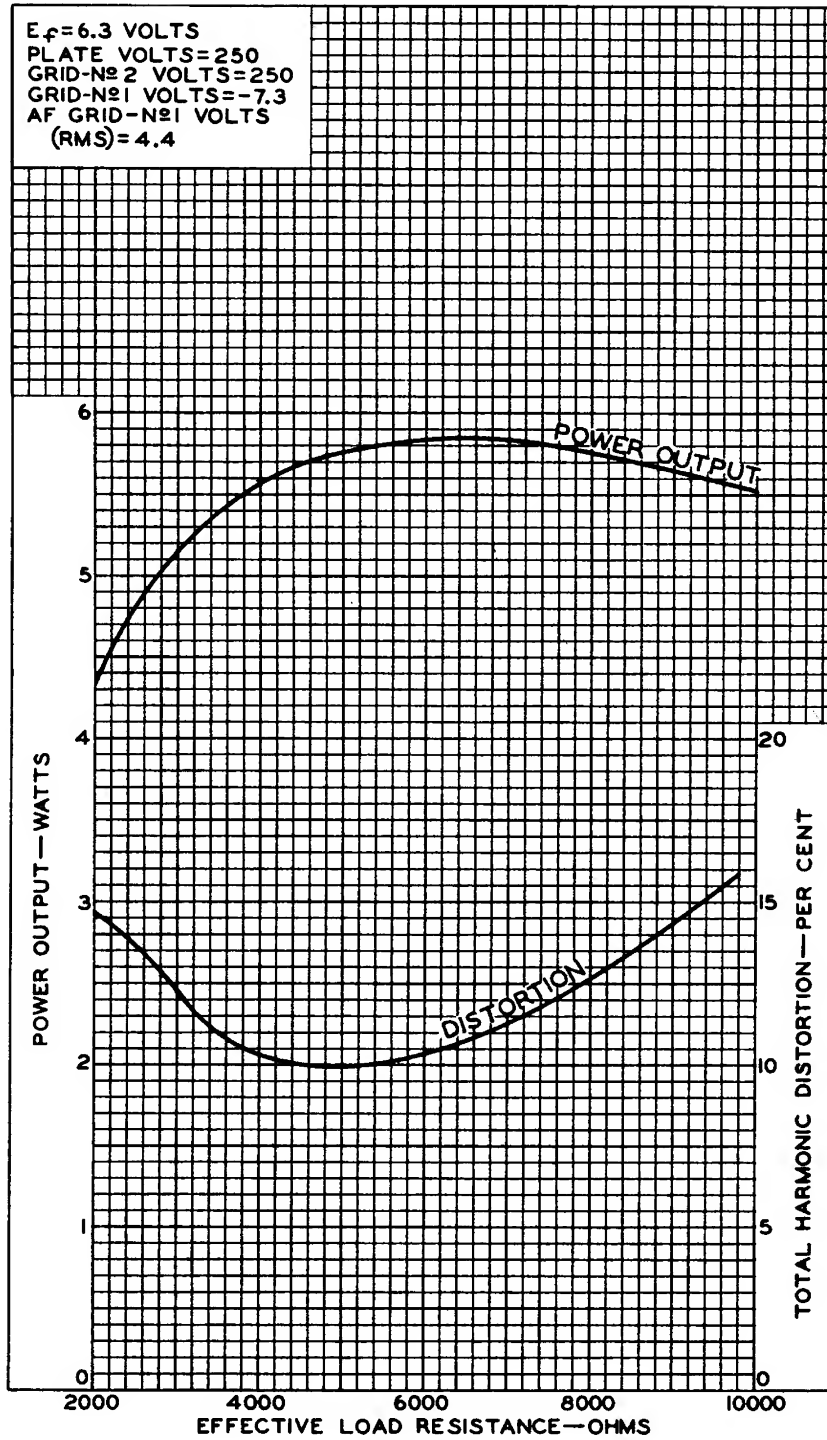
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# OPERATION CHARACTERISTICS



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